

# Guest editorial: Foresight: a trinity to comprehend digital transformation, resilience, and sustainability beyond COVID

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## Introduction

The rapid advancements in digital technologies, such as artificial intelligence (AI), big data analytics, cloud computing and the Internet of Things (IoT), have ushered in a new era of transformation across society, industry and organizations. This digital transformation (DT) has been further accelerated by the COVID-19 pandemic, which has forced businesses to adapt and innovate to survive. Prior to the pandemic, the adoption of new technologies was primarily concentrated in sectors like entertainment and industry. However, the pandemic has expanded the potential applications of digital technologies to a wide range of industries, enabling seamless interactions between users and various digital systems (Khan *et al.*, 2024, Secundo *et al.*, 2021).

While DT offers immense economic opportunities, it is a complex process that requires specialized skills, governance and regulation. Many firms hesitate to invest in DT due to the significant human, structural, intellectual and financial resources required to implement technologies such as big data, AI, deep learning and cloud computing (Mustapha *et al.*, 2024; Pramanik *et al.*, 2019). Furthermore, the long-term outcomes of DT remain uncertain, adding to the hesitation of many organizations (Akhtar *et al.*, 2022; von Leipzig *et al.*, 2017).

However, research has highlighted the potential of DT to build organizational resilience (OR). Despite the negative impacts of the pandemic on global economic development, businesses that invested in DT during this time demonstrated greater resilience and adaptability. Responsive supply chains enabled by digital technologies contributed to business continuity while streaming analytics allowed organizations to effectively respond to both internal and external challenges (Jellason *et al.*, 2024; Keshky *et al.*, 2020). Moreover, DT can enhance environmental sustainability by reducing resource utilization and improving environmental quality. The use of big data and IoT can address environmental sustainability challenges and contribute to a more sustainable future. Companies are increasingly leveraging AI, IoT and big data analytics to implement sustainable business strategies, such as reducing carbon emissions and limiting environmental waste (Demartini *et al.*, 2019). Big data analytics techniques enable new ways of examining and mapping environmental impact, while blockchain technology holds promise for ensuring long-term sustainability by extending product life cycles, maximizing resource utilization and reducing carbon emissions (Esmaeilian *et al.*, 2020).

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## About the special issue

This special issue, affiliated with the 9th Asia International Conference 2023 held by Connecting Asia at Kuala Lumpur Convention Center, Malaysia, aims to explore the interconnectedness between DT, OR and long-term sustainability in the future business environment. By examining the experiences of organizations across various industries, this special issue seeks to provide valuable insights into the strategies and practices that can help businesses navigate the challenges and opportunities presented by the digital landscape.

DT, OR and sustainability are interconnected elements crucial for navigating the post-COVID landscape. DT enables organizations to adapt and thrive amid uncertainties, fostering resilience through innovative practices and technologies, such as big data analytics and artificial intelligence, which have proven essential during crises like the pandemic (Ali, 2024). The integration of sustainability into business models is vital, as it aligns with consumer values and promotes green consumption, which can be enhanced through digital media channels (Baharum *et al.*, 2023; Gregori and Holzmann, 2020). Furthermore, agility in responding to emerging trends is a key determinant of successful DT and improved organizational performance. Thus, a holistic approach that combines these three elements can empower organizations to not only recover from the pandemic's impacts but also to build a sustainable future that meets both economic and environmental goals.

Organizations can leverage foresight for DT by fostering a culture of agility and innovation, which is essential for navigating complex scenarios and uncertainties. This involves articulating a clear vision and ensuring unwavering support from top management to drive digital initiatives effectively (Fernandez-Vidal *et al.*, 2022). By integrating knowledge management (KM) practices, organizations can enhance their capabilities to use data and resources efficiently, thereby improving decision-making and operational efficiency (Ferraris *et al.*, 2019). Additionally, promoting a collaborative leadership approach can facilitate a transformative organizational culture that embraces digital tools and practices (AlNuaimi *et al.*, 2022). Furthermore, organizations should focus on developing employee competencies and engagement in digital strategies, as this can significantly enhance resilience and adaptability during crises. Ultimately, a comprehensive approach that combines leadership, knowledge sharing and employee involvement will enable organizations to successfully navigate their DT journeys.

Key research themes emerging from the study of DT, resilience and sustainability in the post-COVID context include the critical role of IT competencies in enhancing organizational agility and responsiveness, particularly in service sectors and educational institutions (Gull *et al.*, 2023). The integration of big data analytics (BDA) and emerging technologies is pivotal for fostering resilience and driving economic recovery, especially in developing countries like Pakistan (Waqar and Paracha, 2023). Furthermore, the interplay between adaptive culture and DT is essential for achieving OR, suggesting that organizations must cultivate a culture that embraces change and innovation (Gull *et al.*, 2023). Additionally, the need for longitudinal studies to explore consumer behavior dynamics in digital environments highlights the importance of understanding customer-brand interactions in the context of sustainability and digital engagement (Zahid *et al.*, 2024). Collectively, these themes underscore the interconnectedness of DT, resilience and sustainability in navigating future challenges.

## About the articles

Articles within the special issue theme "Foresight: A Trinity to Comprehend Digital Transformation, Resilience, and Sustainability Beyond COVID" can be categorized based on their focus on the interconnections between DT, OR and sustainability practices.

Research indicates that DT enhances OR by fostering adaptive cultures and innovative capabilities, which are crucial for firms to navigate crises like the COVID-19 pandemic (Gull *et al.*, 2023). Additionally, the role of BDA in supporting these transformations is significant, as it aids organizations in making informed decisions that bolster resilience and sustainability efforts (Waqar and Paracha, 2023). Furthermore, corporate sustainability practices are linked to improved performance and stakeholder confidence, suggesting that integrating sustainability into strategic choices can enhance resilience during economic downturns (Najaf *et al.*, 2024). Thus, articles can be organized around these themes, highlighting the synergy between DT, OR and sustainability in a post-pandemic context (Norhayati Rafida and Norailis, 2024; Waqar and Paracha, 2023). The articles presented in this special issue delve into the critical intersection of DT, OR and sustainability, offering valuable insights into the challenges and opportunities facing institutions in the post-COVID era. By examining these interconnected themes, the contributors provide a comprehensive understanding of the factors driving successful adaptation and growth in today's rapidly evolving digital landscape.

### **Digital transformation and organizational resilience**

Several articles in this special issue explore the pivotal role of digital technologies in enhancing OR. The first article, "Resilient higher educational institutions in a world of digital transformation", explores the pivotal role of adaptive culture and DT in fostering OR within South Asian higher education institutions (HEIs). The study highlights the necessity of digital competency among teaching faculty and the importance of a supportive organizational culture to navigate the challenges posed by technological advancements. By emphasizing the interplay between these factors, the article offers valuable guidance for HEIs seeking to enhance their resilience and competitiveness in the digital age. The second article, "A predictive model for collaborative leadership in digital transformation: Does it make a difference in Oman's e-government performance?" focuses on the impact of collaborative leadership on e-government performance in Oman. Through the development of a predictive model, the study identifies key dimensions of collaborative leadership, such as self-directed teams and leadership agility, that are essential for successful DT initiatives. The findings offer valuable insights for government leaders seeking to improve their organizations' effectiveness and efficiency in the digital era.

### **Sustainability and digital technologies**

Sustainability is another key theme explored in this special issue. The articles presented in this special issue also delve into the critical role of digital technologies in enhancing organizational performance and resilience. "Effect of enterprise risk management on firms' outcomes with the moderating effect of knowledge management" examines the interplay between enterprise risk management (ERM) and KM in influencing firms' outcomes. The study finds that ERM positively impacts firm performance and that KM can amplify these effects, particularly in developing countries like Malaysia. "Adoption of Big Data Analytics in the Private Sector of Developing Countries: A Study on Pakistan" highlights the potential of BDA to drive economic growth and innovation in emerging markets. The research identifies key factors influencing BDA adoption, such as top management support and the quality of data handling and underscores the need for supportive regulations and investments to facilitate its widespread implementation.

### **Corporate governance and social responsibility**

The articles also delve into the critical role of corporate governance and social responsibility in navigating the digital landscape. "Women on board and business performance" examines the relationship between female board representation and corporate social

responsibility initiatives, finding that female board members are more likely to engage in CSR activities and that this positively impacts firm performance. “Examining sustainable consumption patterns through green purchase behavior and digital media engagement: a case of Pakistan’s postmillennial” explores the factors influencing sustainable consumption behavior among young consumers in Pakistan, identifying digital media engagement and social values as key drivers of green purchasing intentions.

### **Ethical leadership and employee well-being**

Ethical leadership is another important theme explored in this special issue “Ethical leadership, employees’ job satisfaction and job stress in the restaurant industry” highlights the importance of ethical leadership in fostering a positive work environment and reducing job stress among employees in the restaurant sector. The study finds that ethical leadership can significantly improve job satisfaction and employee well-being. “Unlocking sustainability: the dynamic nexus of organizational support, identification, and green HRM practices in cultivating pro-environmental excellence” focuses on the role of green human resource management (HRM) in promoting environmental sustainability. The study finds that organizations with strong organizational support and employee identification are better equipped to implement effective green HRM practices and foster a culture of environmental responsibility. The articles “Impacts of Cultural Practices on Consumers Buying Behavior in Sales Promotional Activities in the Settings of COVID-19” and “Unlocking the Influence of Psychosocial Safety Climate on Work Engagement and Job Satisfaction: Exploring the Mediating Role of Job Demands” focused on the psychological responses that leads to the social wellbeing.

### **The role of digital technologies in environmental communication**

“Foresight of environmental communication literatures: bibliometric versus ChatGPT” compares bibliometric analysis and ChatGPT in assessing trends in environmental communication research. The study finds that both methods have their strengths and weaknesses and that a combination of both can provide valuable insights into the field. “Telepresence, social presence and involvement in consumer’s intention to buy apparels through an interplay of consumer brand engagement” investigates the impact of digital experiences on consumer brand engagement and purchasing intentions in the apparel industry. The study finds that telepresence and social presence can enhance consumer engagement and increase the likelihood of purchasing apparel.

Collectively, these articles provide a solid foundation for understanding the complex interplay between DT, resilience and sustainability. By examining the experiences of HEIs and government organizations, the contributors offer practical guidance and recommendations for navigating the challenges and opportunities presented by the digital landscape. As organizations continue to adapt to the rapidly changing technological environment, the insights provided in this special issue will be invaluable for fostering resilience, promoting sustainability and achieving long-term success.

In conclusion, the articles presented in this special issue offer valuable insights into the critical role of digital technologies, corporate governance and sustainability in shaping organizational success. By examining the experiences of firms in various sectors and regions, the contributors provide practical guidance and recommendations for navigating the challenges and opportunities presented by the digital landscape. As organizations continue to adapt to the rapidly changing technological environment, the insights provided in this special issue will be invaluable for fostering resilience, promoting sustainability and achieving long-term success.

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### Further reading

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